LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1.   (Previously presented) A process for the packet-oriented transmission of security-relevant data under application of at least one security-oriented message consisting of a first data packet and an allocated second data packet, and at least one transmission system with a parallel and/or serial network and/or bus system with at least one user connected to it, the process, comprising:

transmitting the security-relevant data and redundant information based on the security-relevant data within the at least one security-oriented message,

wherein, for each security-oriented message, the security-relevant data is transmitted in the first data packet and the redundant information, based solely on all the security-relevant data of the first data packet, is transmitted in the allocated second data packet of the at least one security-oriented message.

2.   (Previously presented) The process according to claim 1, wherein the redundant information is encoded.

3.   (Previously presented) The process according to claim 1, wherein the redundant information is a check sum (CRC) calculated over the security-relevant data.

4.   (Previously presented) The process according to claim 1, wherein the security-relevant data is selected from the group consisting of user data, check data, and control data.

5.   (Previously presented) The process according to claim 1, further comprising transmitting several packets within a predefined superset frame structure.

6. (Previously presented) The process according to claim 5, wherein the packets within a predefined superset frame structure include the security-relevant data and the redundant information that are allocated to each other.

7. (Previously presented) The process according to claim 1, wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in a parallel or serial way.

8. (Previously presented) The process according to claim 1, wherein the packets with the security-relevant data and the redundant information that are allocated to each other are transmitted in strings or separately.

9. (Previously presented) The process according to claim 1, wherein the packets include an addressing block and/or an identification code for their logical allocation.

10. (Previously presented) A device for a transmission system with at least one parallel and/or serial network and/or bus system, for the packet-oriented transmission of security-relevant data under application of at least one security-oriented message consisting of a first data packet and an allocated second data packet, the device comprising:

means, arranged on the side of the sender, for the packet-oriented embedding of the security-relevant data into the first data packet and for the packet-oriented embedding of each allocated redundant information, based solely on all the security-relevant data of the first data packet, into the allocated second data packet of the security-oriented message.

11.   (Previously presented) The device according to claim 10, further comprising an encoding device for the encoding of the redundant information.

12.   (Previously presented) The device according to claim 10 wherein the means for embedding are allocated means for the generation of the redundant information with the same number of bits (n) as the security-relevant data to be transmitted.

13.   (Previously presented) The device according to claim 10 wherein the means for the generation and/or embedding are designed such that any possible combination of the security-oriented data of a packet unambiguously results in exactly one of the possible combinations within the packet having the respective allocated redundant information.

14.   (Previously presented) The device according to claim 10, further comprising means arranged on the side of the receiver for the verification of an error-free data transmission based on the security-relevant data embedded in at least one packet and the allocated redundant information, wherein each redundant information based on the security-relevant data of a respective one packet is embedded in a separate packet.

15.   (Previously presented) The device according to claim 14 wherein the means for the verification are allocated means for reading out and allocating security-relevant data and allocated redundant information received in different packets.

16.   (Previously presented) The device according to claim 10, wherein several packets with the security-relevant data and/or the allocated redundant information are capable of being transmitted within a predefined superset frame structure.

17.   (Previously presented) The device according to claim 10, further comprising means for the packet-oriented embedding and readout of addressing blocks and/or identification codes for the logical allocation of individual packets and/or their contents to each other.

18.   (Previously presented) The device according to claim 10, wherein the means are allocated to slave devices and/or a master device.

19.   (Previously presented) A transmission system comprising:
at least one parallel and/or serial network and/or bus system; and
at least one device according to claim 10.

20.   (Previously presented) The transmission system according to claim 19, wherein the network and/or bus system is at least one ring-, line-, star- and/or tree-shaped network and/or bus structure.

21-22. (Cancelled)

23.   (Previously presented) The transmission system according to claim 19, wherein the at least one parallel and/or serial network and/or bus system comprises an Interbus system.

24-27. (Cancelled).

28.   (New) A process for the transmission of a security-oriented message, comprising:
generating, at a sending side, a first data packet consisting essentially of a block of user specific data and a block of check data, the first data packet having a first number of bits;

calculating, at the sending side via a processor, a single cyclic redundancy check code for the block of user specific data and the block of check data;

generating, at the sending side, a second data packet consisting essentially of the single cyclic redundancy check code; and

transmitting, over an unsecured bus or network, the first and second data packets.

29.   (New) The process according to claim 28, further comprising combining and jointly transmitting the first and second data packets within a frame structure.

30.   (New) The process according to claim 28, further comprising transmitting the first and second data packets within different frame structures.

31.   (New) The process according to claim 28, wherein the step of transmitting the first and second data packets comprise separately transmitting the first and second data packets.